

Appl. No. 10/796,700
Amdt. dated August 18, 2004
Reply to Office Action of June 30, 2004

PATENT

REMARKS/ARGUMENTS

Claims 1-21 are now pending in the present application. Claims 11 and 17 have been amended, claim 2 has been canceled, and claims 20-21 added. No new matter has been introduced thereby.

Claims 1, 4, 6, 7, 10, 11, 12, 14, and 15 stand rejected under 35 U.S.C. §102(b) as being anticipated by Hammer, et al. As shown above, claim 1 has been amended to more clearly recite the present invention. As amended, claim 1 recites a method for processing integrated circuit devices including a water recycling process. The method includes operating a chemical mechanical planarization process, which includes a discharge for process water. The process water is used to process one or more semiconductor wafers. The method selectively discharges process water from the discharge and transfers the process water from the chemical mechanical planarization process to a facility process. Next, the method uses the discharged water in the facility process, which is selected from a cooling tower and/or a local scrubber. Hammer et al., does not show the facility process including cooling tower or scrubber in the manner claimed. The Examiner cites Bowman, et al. to teach the claimed scrubber station in rejecting claims 2, 5, 8, 9, 13, and 16-20.

Applicants' assert that Bowman, et al. in combination with Hammer et al., still fail to teach the invention of claim 1 in the manner claimed. At best, Bowman, et al. taught a "scrub module" that includes "cleaning brushes" and other features. Such scrub module is specifically designed for cleaning semiconductor wafers. That is, the scrub module is a conventional semiconductor process. In contrast, claim 1 recites a facility process that is selected from a cooling tower and/or a local scrubber, among other features. Neither Bowman, et al. nor Hammer et al. disclose the claimed cooling tower as admitted by the Examiner. Additionally, the local scrubber as a facility process in the manner claimed is also not shown or suggested by either reference. Bowman, et al. taught a semiconductor process not a facility process such as the claimed scrubber. Accordingly, claim 1 is patentable under 35 U.S.C. §102(b) and §103 over the cited references. Claims 4, 6, 7, and 10 are at least patentable for the reasons noted as well as others.

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Amended claim 11 is also patentable over the cited art. Claim 11 recites a method for processing integrated circuit devices including a water recycling process. The process includes operating a chemical mechanical polishing process using an incoming stream of ultra-pure water. The chemical mechanical polishing process includes a discharge for used ultra-pure water. The process uses the ultra-pure water to clean one or more semiconductor wafers while a flow of any chemical species have been stopped to the one or more semiconductor wafers. That is, the ultra-pure water is used by itself to rinse the one or more semiconductor wafers. The used ultra-pure water forms a facility water, which will later be used. Clearly, Hammer et al. does not show or suggest using the ultra-pure water in the manner claimed and then using the used ultra-pure water in a facility process as claimed. At best, Hammer et al. taught a conventional waste treatment facility that included ultra filtration, chemical treatment, and neutralization. See, Figures 1A, 1B, 2A, and 2B and accompanying text. The process selectively discharging the facility water from the discharge of the chemical mechanical polishing process and transfers the facility water from the discharge of the chemical mechanical polishing process to a facility process, such as a scrubber or cooling tower. The transferring is free from any chemical treatment of the discharged process water. The process uses the discharged process water in the facility process. Accordingly, claim 11 is patentable over the cited art. Additionally, claims 12 through 16 are also patentable for at least the same reasons and others.

New claims 20 and 21 have been added. No new matter has been introduced thereby.

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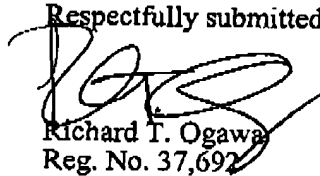
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CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,



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